

REMARKS

In the Office Action, the Examiner rejected the claims under 35 USC §103. The rejections are fully traversed below. Claims 1-49 remain pending.

Reconsideration of the application is respectfully requested based on the following remarks.

REJECTION OF CLAIMS UNDER 35 USC §103

In the Office Action, the Examiner has rejected the claims under 35 USC §103 as being unpatentable over Magret, U.S. Patent No. 6,856,624, ('Magret' hereinafter) in view of Johansson et al, U.S. Patent Application Publication No. 2002/0080752, ('Johansson' hereinafter). This rejection is fully traversed below.

The claimed invention enables Mobile IP Home Agent clustering to be implemented. This is accomplished through intercepting and routing registration requests and replies via a main Home Agent that acts as a Home Agent cluster controller. In this manner, Mobile IP subscribers may be supported by multiple Home Agents, rather than a single, statically configured Home Agent. This may be desirable, for example, to perform load balancing.

For example, with respect to independent claim 1, a method of processing a registration request received from a Mobile Node is performed by a first one of a plurality of Home Agents. The first Home Agent receives a registration request addressed to a virtual Home Agent address associated with the plurality of Home Agents, and sends the registration request to a second one of the plurality of Home Agents. The first Home Agent creates a temporary binding between the Mobile Node and the Foreign Agent to which the Mobile Node has roamed. The temporary binding is updated to create a permanent binding when the registration reply is received from the second Home Agent.

It is important to note that the method recited in claim 1 is performed by a Home Agent. However, as will be described in further detail below, the cited references, separately

or in combination, fail to disclose or suggest performing the claimed method steps by a Home Agent. It follows that the references fail to disclose or suggest performing the claimed method by a first one of a plurality of Home Agents.

Magret discloses a network providing mobile IP services to mobile nodes sharing the same private IP address. A mobile node visits a foreign network from its home network and transmits a registration request including its private IP address to a foreign agent on the foreign network. If the foreign agent determines that another mobile node with a valid registration shares the same private IP address, the foreign agent sends a registration reply to the mobile node requesting that the mobile node use a temporary address. The temporary address is sent along with the registration request to the registering mobile node's home agent. See Abstract; col. 5, line 62 to col. 6, line 10. It is important to note that these steps are performed by the foreign agent rather than a home agent.

The Examiner asserts that Magret, col. 5, line 62 to col. 6, line 10 discloses "receiving a registration request associated with the plurality of Home Agents." However, only one Home Agent is disclosed in Magret. This is further emphasized at col. 5, lines 62-64, which state that the "mobile node...seeks to register with its home agent..." Therefore, the registration request is associated with only a single Home Agent, not a plurality of Home Agents.

The Examiner further states that col. 10, lines 8-27 of Magret disclose that "the second one of the plurality of Home Agents creates a binding between the Mobile Node and the Foreign Agent." As set forth above, Magret discloses only a single Home Agent. Moreover, it is important to note that col. 10, lines 8-27 refer to steps performed by a Foreign Agent, not a Home Agent.

Furthermore, the Examiner asserts that Magret discloses "receiving a registration reply from the second one of the plurality of Home Agents" by the first one of the plurality of Home Agents, citing col. 5, line 62 to col. 6, line 10. However, Magret fails to disclose or suggest a first Home Agent receiving a registration reply from a second Home Agent. Rather, the registration reply referred to in Magret is sent by the Foreign Agent. It follows that Magret fails to disclose or suggest "updating the temporary binding to create a permanent binding when the registration reply is received from the second one of the plurality of Home Agents" by the first one of the plurality of Home Agents. In fact, Magret fails to disclose any type of communication between two different Home Agents, and therefore fails to disclose

the claimed interaction between two different Home Agents. Similarly, col. 5, line 62 to col. 6, line 10 disclose sending a registration reply by the Foreign Agent, and therefore fails to disclose “sending the registration reply to the Foreign Agent identified in the temporary binding.”

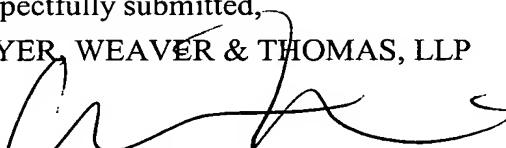
Johansson fails to cure the deficiencies of the primary reference. In addition, the Examiner acknowledges that Magret is silent regarding “receiving the registration request addressed to a virtual Home Agent address.” While Johansson does disclose the use of a virtual home agent, the home agents are connected solely for redundancy purposes. Thus, data is transmitted by a primary to a backup home agent via the virtual router redundancy protocol (VRRP). In other words, the backup home agent is updated with registrations received by the primary home agent via the VRRP. See paragraph 0142. It would therefore be unnecessary for a Home Agent that is not processing registration requests to intercept registration requests. As such, Johansson teaches away from intercepting registration requests by a Home Agent that will not be servicing the request. Moreover, in view of the deficiencies of the primary reference, the combination of the cited references would fail to achieve the desired result. Applicant therefore respectfully submits that the independent claims are patentable over the cited art.

The dependent claims depend from one of the independent claims and are therefore patentable for at least the same reasons. However, the dependent claims recite additional limitations that further distinguish them from the cited references. The additional limitations recited in the independent claims or the dependent claims are not further discussed, as the above discussed limitations are clearly sufficient to distinguish the claimed invention from the cited references. Thus, it is respectfully requested that the Examiner withdraw the rejection of the claims under 35 USC §103(a).

SUMMARY

If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

Applicants hereby petition for an extension of time which may be required to maintain the pendency of this case, and any required fee for such extension or any further fee required in connection with the filing of this Amendment is to be charged to Deposit Account No. 50-0388 (Order No. CISCP271).

Respectfully submitted,
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